VIDEOTEX COMMUNICATIONS

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As the pioneer of private videotex systems, the

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Videotex has been described as the first new, universally applicable, participatory communications medium since the invention of the telephone. As such it spans both business and consumer telecommunications. It is useful both in the office and in the home.

There are over 20,000 videotex terminals in use in the U.K. About half are colour televisions with added videotex capability which consists of a telephone line connection to PSTN, an automatic dialler, an integral chip modem operating at 1200/75 bps or 1200/1200 bps and a local directory for storing telephone numbers. By pressing a button the television will dial a selected number and automatically log on to a computer. Thereafter the television can be used as a colour computer terminal. For best results, the human interface should be kept the same as Prestel's pioneering system although state of the art private videotex systems can manipulate and process data in any desired form.

The other installed videotex terminals are purpose-built desk-top terminals, looking rather like colour visual display units, which generally use alpha-numeric typewriter style keyboards rather than numeric keypads and do not have TV reception capability. Most of the terminals of both kinds are used in business for business communication. In addition low cost adaptors can be purchased for domestic televisions that convert them into videotex terminals.

Videotex scores over other telecommunication methods in three areas. Costs are low, the technique was designed for mass communication and genuinely anyone can use it and finally the colour characters and graphics enable real communication - the transfer of meaning. Not surprisingly it is being widely used and a mass of operating experience can now be found.

Within business there are two basic uses for the technology. These are 'within' the organization for information dissemination and information processing and 'external' to the organization communicating with agents, clients, distributors, customers and suppliers. In the 'within' scenario videotex is used for tactical business reasons supporting organizational teamwork through the creation of shared understandings achieved by improved communication. In the 'external' mode videotex is used to improve communication with external agencies for strategic reasons. Building better customer communications means improving services which in turn means strengthening competitive position which gets more business.

Not surprisingly perhaps, much of the initial thrust of videotex has gone towards supporting strategic business objectives. These can generally be stated as improving a company's market share which in an environment where most markets are relatively static and where competition is intense means taking business from competitors. Videotex improves competitive trading position.

To illustrate the point, consider four quite different businesses that share only the competitive environment and the presence of powerful and successful players. In the car industry by the end of 1983, virtually every major car dealer will have installed a videotex terminal that connects to a computer owned by a car manufacturer. The terminal is designed to improve communication between dealer and manufacturer by providing enhanced information services so that together they can sell more cars. Typically, using the terminal the dealer can immediately locate a car whose configuration matches exactly the colour, trim, power and options requirements of the customer. Today virtually every car is customised. The customer can get delivery on a customised car faster

than delivery that used to be available on standard cars. The days of the customer placidly accepting long waits for deliveries are long since gone. Moreover with the direct on-line link between dealer and manufacturer sales and trend information can be quickly exchanged, prices can be changed over-night and the entire competitive process can be sharpened.

Such is the power of the medium that all the major car manufacturers are racing to bring the benefits to their dealers and the dealers, with appetites whetted for better information, are pressing the manufacturers to extend the services fast.

Much the same kin d of development has happened in the travel business where initially the holiday tour companies, eager to improve competitive positioning, invested in reservation and booking systems that could be operated real-time by a videotex terminal in the travel agents shops. Both the car and travel businesses are already videotex-saturated for the first round of applications. In both cases more extended applications are on the way.

Two other businesses with widely spread marketing activities are following the videotex race. Life insurance is very competitive and relies on close, fast information ties between brokers/salesmen and the insurance companies. Fast quoatations mean business secured. Slow footwork means business lost. Communications by post are too slow. Videotex does it quickly, easily and cheaply and is sophisticated enough to be comprehensive providing even hard copy print-out when needed. Development systems are under intensive trial throughout the leading edge companies.

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Another competitive business is pharmaceuticals. Orders need to be collected and processed quickly. Sales information needs to be speeded back to base for analysis and synthesis. Dispersed sales forces need up-to-the-minute information to optimise performance. Virtually every pharmaceutical company is beavering away with videotex systems development.

There are many other examples. Down on the farm life is tough selling fertilisers and feeds. Foreign competition is pervasive. Dispersed salespeople and distributors need ammunition to win orders. Time is often of the essence. Videotex, provides the communications link. Salespeople have the terminals at home to report orders, send and receive messages and plan calls. The private videotex systems run 24 hours a day and don't take holidays. Overnight messaging is becoming increasingly common.

Some of these messaging systems are extremely powerful. From a videotex television in the home messages can be sent to the corporate videotex system for dissemination among all other users of the system and/or for gateway into or through data communications networks or even through the telex system. Messages similarly can be routed back from any of these systems. The power of these systems has to be seen to be appreciated.

Videotex terminals have dramatically changed in the last twelve months with the release of multi-function teleputers which combine videotex with local personal computing, local database and videocassette and videodisk. Connecting all these technologies together to run within a coherent systems environment creates numerous application and communication opportunities.

Videotex is being increasingly used as the gateway to other networks and other computing systems. Prestel have a public gateway system. Private systems have long had extremely powerful gateway interfaces. Typically a videotex user can connect to a private videotex system to which it sends a message; the private system then reformats the message and sends it to another system; when the other system returns a message it is reformatted and sent back to the videotex terminal. The entire operation is automatic.

Videotex does not have to work only over the PSTN. Modern terminals can use the X.25 packet switch service or they can gateway through Prestel to a remote host computer. Either way line costs are dramatically reduced. Any kind of low rate remote transaction processing is likely to be cheaper with videotex - apart from the other benefits.

But videotex is not really a competitor to other forms of data processing. Videotex applications tend to break new ground displacing traditional mail, voice telephony or physical visits. Videotex goes where computers haven't been before.

Some applications are truly novel. One clearing bank uses videotex for computer based training. Videotex terminals in high street branches are used to teach bank procedures and provide remedial or reference training. Another system used by a major charge card company provides real-time up-dating to Prestel for the ward-winning Sky-Guide air travel information publishing service. Other videotex systems are used for in-house management support systems.

Videotex has become integrated with other computing and telecommunication systems. On one office system a handwritten message can be entered into the system and retrieved by conventional visual display unit or videotex terminal. The media conversion characteristics of these systems are both original and useful. Highly sophisticated data management systems can format, access and retrieve information in a host of different ways.

Videotex systems are usually inexpensive and fast to install and implement. Live systems are generally up and running in three months. Most systems have packaged software that handles a wide spectrum of applications. User profiles are remarkably similar - leading edge companies in a sector often with dominant market share where competition is real. Also rans don't understand videotex.

Quite often, the systems are installed at the instigation of non-DP operational line management - people who want results. Videotex is therefore high profile in an organization not a toy to be tinkered with in the backroom, Top management like it because they can use it and because they can experience the benefits at first hand. They don't care about the technology. They care about the pay-back.

DP people tend to be schizophrenic about videotex. Because the technology is simple they often believe that it is trivial. There are certainly no careers to be had as systems programmers on videotex systems. But because videotex makes communications simple, is it therefore a toy or a threat? The answer is probably neither. It is just a new and largely complementary communications medium.

The converse of course is that non-DP management has earned high marks for installing videotex systems fast and on budget. The ease of installation tends to throw a saintly glow over the installers and there is little doubt that many careers have flourished. It must be said that the rewards have been deserved because the level of courage displayed in choosing the radical videotex has usually been exemplary.
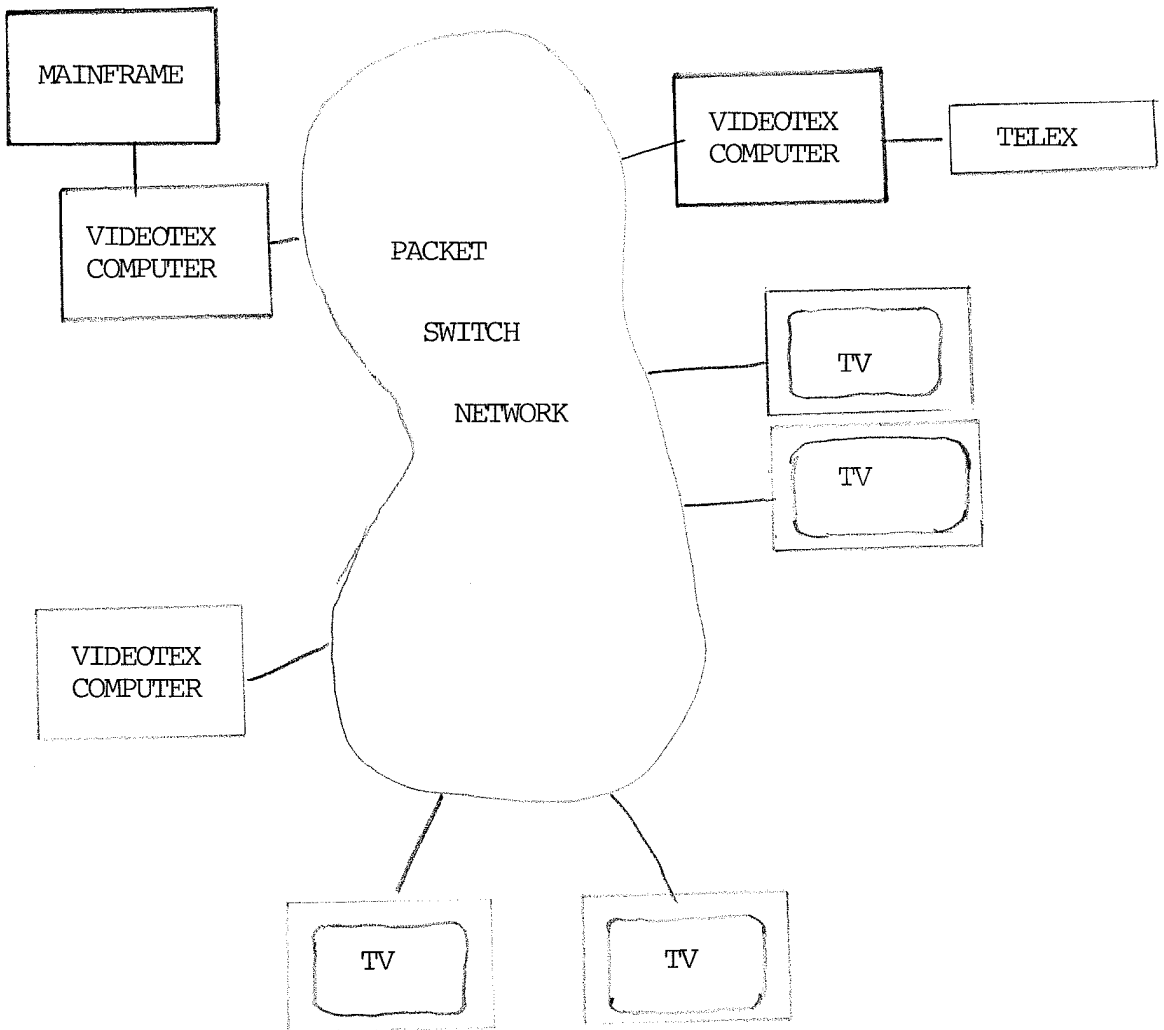
In a difficult economic climate, everyone loves a winner particularly if the winner has helped improve sales. Most people can control costs and shave pennies here and there. Few people can make money. In the right environment videotex is a sales aid and a money-maker.

But not for everyone because one has to believe that better communications lead to better business. Most computer systems are appalling communicators in the true sense of the word. Look at any visual display screen or any print-out to see mindless information, and then look at a videotex screen and see the possibilities for communicating with people.

Videotex may be a small step for computing but it is a giant leap forward for communication.

M. J. Aldrich
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NETWORKED VIDEOTEX

MAINFRAME

VIDEOTEX
COMPUTER

VIDEOTEX
COMPUTER

PACKET

SWITCH

NETWORK

VIDEOTEX
COMPUTER

TELEX

TV

TV

TV

TV

SIMPLE   VIDEOTEX   GATEWAY

MAINFRAME
COMPUTER

GATEWAY
PROTOCOL

VIDEOTEX
GATEWAY COMPUTER

TVs

TVs

TVs